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EXAMINER	
YODER III, CHRISS S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/541,614	Applicant(s) KASHIYAMA, RISTUO
	Examiner Chriss S. Yoder, III	Art Unit 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 10-13, and 15-19* is/are rejected.

7)☒ Claim(s) *9 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 April 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 7, 11, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada et al. (US Patent # 5,758,210).

2. In regard to claim 1, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block (figure 7: 17 is a sensor block outputting a signal Vout), a characteristic determination circuit (figure 16: 52, 53, and 54 read the signals from the image sensor blocks) that determines the characteristics of the image signal (figure 51: #3015, this step determines the characteristics, contrast, of the image signals), and depending on the result, a reading processing circuit (figure 16: 52 selects which cells to read and controls the reading of the signals from the sensor) applies a signal reading process at least to other cells not included in the first set if the characteristic signal is a predetermined result, and disabling the signal reading of the other cell units if the characteristic signal is another predetermined result (figure 51: #3020 and #3045, if the characteristic signal, contrast, is low then it reads the other cells #3045, if its another value, do not read the other cells #3020).

In the Hamada reference there is a sensor block 17 that has a plurality of detection areas 16. The sensor outputs a characteristic signal (the contrast in figure 51, step 3015) to determine if the image signal is read out of the sensor (figure 51: steps 3045-3055).

3. In regard to claim 2, note Hamada discloses control circuit (figure 16: 52) that operates the charge accumulation in the image sensor previous to the characteristic determination process (figure 51: #3005 and #3015).

4. In regard to claim 3, note Hamada discloses that the cell units output a contrast signal (column 23, lines 39-46; and figure 51: #3000-3015).

5. In regard to claim 4, note Hamada discloses that the cell units output a contrast signal (column 23, lines 39-46; and figure 51: #3000-3015).

6. In regard to claim 5, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block (figure 7: 17 is a sensor block outputting a signal Vout), a reading circuit (figure 16: 52, 53, and 54 read the signal from the image sensor) that reads the image signal after accumulation has finished (figure 51: #3000-3015 accumulation happens before reading the signal), a reading control circuit that reads the characteristic signal (figure 16: 52, 53, and 54 read the signal from the image sensor) and also read the image signal (figure 16: 55 and 56 output the image signal from the sensor), a characteristic determination circuit (figure 16: 52, 53, and 54 read the signal from the image sensor) that determines the characteristics of the image signal (figure 51: #3015 the contrast is the characteristic signal) to determine if the second read process is

executed (figure 51: #3020 and #3045, if the characteristic signal, contrast, is low then it reads the other cells #3045, if its another value, do not read the other cells #3020), and a circuit for detecting focus or distance information (figure 16: 17 the sensor outputs the characteristic and image signals to detect focus or distance information; and figure 51: #3075 calculates focus information).

In the Hamada reference there is a sensor block 17 that has a plurality of detection areas 16. The sensor outputs a characteristic signal (the contrast in figure 51, step 3015) to determine if the image signal is read out of the sensor (figure 51: steps 3045-3055).

7. In regard to claim 7, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block (figure 7: 17 is a sensor block outputting a signal Vout), a first output circuit for outputting the characteristic signal (figure 16: 53 outputs the characteristic signals), a second output circuit for outputting the image signal (figure 16: IS1-IS7 output the image signal), a first and second signal reading circuit for reading the output circuits (figure 16: 52 reads the characteristic signal and 54 reads the image signal), a reading control circuit for comparing the level of the characteristic signal with a determination level (figure 16: 52; and figure 51: #3015; though it does not explicitly show a determination level, for a comparison, it is inherent for there to be determination level to compare the output signal with), and reading the image signal if the comparison results in one relationship, and disabling the read if the comparison results in a second relationship (figure 51: : #3020 and #3045, if the characteristic signal, contrast, is low then it reads

the other cells #3045, if its another value, do not read the other cells #3020), and a circuit for detecting focus or distance information (figure 16: 17 the sensor outputs the characteristic and image signals to detect focus or distance information; and figure 51: #3075 calculates focus information).

In the Hamada reference there is a sensor block 17 that has a plurality of detection areas 16. The sensor outputs a characteristic signal (the contrast in figure 51, step 3015) to determine if the image signal is read out of the sensor (figure 51: steps 3045-3055).

8. In regard to claim 11, note Hamada discloses that the characteristic signal is the difference between the maximum and minimum values in the image signal (figure 51: #3015; the contrast).

9. In regard to claim 17, note Hamada discloses a focusing-information detecting apparatus executing accumulation of an image signal, a focusing calculation according to the image signal sent from a sensor block (figure 7: 17 is a sensor block outputting a signal Vout), a characteristic determination circuit (figure 16: 53 reads the characteristic signal) that determines the characteristics of the image signal (figure 51: #3015 the characteristic signal is the contrast), and depending on the result, a reading processing circuit (figure 16: 52 controls which sensor blocks to read and obtain a signal from) applies a signal reading process at least to other cells not included in the first set if the characteristic signal is a predetermined result, and disabling the signal reading of the other cell units if the characteristic signal is another predetermined result (figure 51: #3020 and #3045, if the characteristic signal, contrast, is low then it reads the other

cells #3045, if its another value, do not read the other cells #3020), and a focus calculation after accumulating the image signal (figure 51: #3005, #3075; 3005 accumulates the signal in the sensor blocks, and 3075 calculates the focus information).

10. In regard to claim 19, note Hamada discloses that the cell units output a contrast signal (column 23, lines 39-46; and figure 51: #3000-3015).

In the Hamada reference there is a sensor block 17 that has a plurality of detection areas 16. The sensor outputs a characteristic signal (the contrast in figure 51, step 3015) to determine if the image signal is read out of the sensor (figure 51: steps 3045-3055).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 6, 10, 12, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US Patent # 5,758,210) as applied to claim 5 above, and in view of Ide (US Patent # 5,905,919).

12. In regard to claim 6, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block, a reading circuit that reads the image signal after accumulation has finished, a reading control circuit that reads the characteristic signal and also read the image signal, a characteristic determination circuit that determines the characteristics of

the image signal that determines if the second read process is executed, and a circuit for detecting focus or distance information. Therefore, it can be seen that the Hamada device fails to disable the second read process if the characteristic signal indicates that the image is inappropriate for focus or distance detection. Ide discloses the process of disabling the second read if the characteristic signal indicates that the image is inappropriate for focus or distance detection (figure 9: S2-S8; in this process, if the focus is undetectable, the process will not exit until the signal is focusable, preventing the second read). Ide teaches that this process is preferred in order to continue with the focus detection until the image focus is possible, so the image can be captured clearly. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read in order to continue with the focus detection until the image focus is possible, so the image can be captured clearly.

13. In regard to claim 10, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block, a first output circuit for outputting the characteristic signal, a second output circuit for outputting the image signal, a first and second signal reading circuit for reading the output circuits, a reading control circuit for comparing the level of the characteristic signal with a determination level, reading the image signal if the comparison results in one relationship, disabling the read if the comparison results in a second relationship, and a circuit for detecting focus or distance information. Therefore, it can be seen that the Hamada device fails to read the image once the focus or distance detection has succeeded. Ide discloses that once the focus detection has

succeeded the process moves on to read the image signal (figure 9: S2-S6; and column 10, lines 29-32). Ide teaches that this process is preferred in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly.

14. In regard to claim 12, note Hamada discloses a focus or distance detection apparatus with a plurality of detection areas (figure 7: 17 is a sensor block with a plurality of detection areas 16), a focus detecting sensor (figure 7: 17 is a sensor block outputting a signal Vout), a difference output section for outputting the difference between the maximum and minimum of the image signal (figure 16: 53 outputs the brightness of the sensor; and figure 51; #3005-3015; although it does not explicitly show that the circuit outputs the difference, but in order for the circuit to compare the contrast it would inherently calculate and output the contrast level), an image signal output section in each detection area (figure 16: IS1-IS7 output the image signal), a signal reading section that reads the difference output (figure 16: 52 and 53 read and output the difference signal), a reading control circuit (figure 16: 52 controls which sensor blocks to read), and calculation circuit for calculating focus or distance detection information (figure 7: 33 calculates the focus detection information). Therefore, it can be seen that the Hamada device fails to enable the read if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a

predetermined level. Ide discloses that the read is enabled if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a predetermined level (column 1, lines 45-55; figure 9: S1-S8; the focus detection process uses contrast values, and based on the level of the contrast it determines if the image is in focus or not, if the contrast level is greater than a predetermined level it is considered in focus, and if the contrast is smaller than a predetermined level it is considered not in focus, in this case the focus detection process never lets the camera continue with the read process, thereby disabling the read). Ide teaches that this process is preferred in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly.

In the Hamada reference there is a sensor block 17 that has a plurality of detection areas 16. The sensor outputs a characteristic signal (the contrast in figure 51, step 3015) to determine if the image signal is read out of the sensor (figure 51: steps 3045-3055).

15. In regard to claim 15, note Ide discloses that once the focus detection has succeeded (the characteristic signal is greater than the determination level) the process moves on to read the image signal (figure 9: S2-S6; and column 10, lines 29-32).

16. In regard to claim 16, note Hamada discloses a focus or distance detection apparatus with a plurality of detection areas (figure 7: 17 is a sensor block with a

plurality of detection areas 16), a focus detecting sensor (figure 7: 17 is a sensor block outputting a signal Vout), a maximum output section and minimum output section for outputting maximum and minimum of the image signal (figure 16: 53; and figure 51; #3005-3015; although it does not explicitly show that the circuit outputs the maximum and minimum values, in order for the circuit to compare the contrast it would inherently need to output them in order to calculate the contrast level), an image signal output section that outputs the image signal in each focus or detection area (figure 16: IS1-IS7 output the image signal for each detection area), a reading control circuit for reading the maximum value and the minimum value and calculating the difference between the two (figure 16: 53 outputs the brightness; and figure 51; #3005-3015; although it does not explicitly show that the circuit calculates the difference, but in order for the circuit to compare the contrast it would inherently calculate and output the contrast level)), and a calculation circuit for calculating focus or distance detection information (figure 7: 33 calculates the focus detection information). Therefore, it can be seen that the Hamada device fails to enable the read if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a predetermined level. Ide discloses that the read is enabled if the difference is greater than a predetermined level and to disable the read if the difference is smaller than a predetermined level (column 1, lines 45-55; figure 9: S1-S8; the focus detection process uses contrast values, and based on the level of the contrast it determines if the image is in focus or not, if the contrast level is greater than a predetermined level it is considered in focus, and if the contrast is smaller than a predetermined level it is considered not in focus, in this case the focus

detection process never lets the camera continue with the read process, thereby disabling the read). Ide teaches that this process is preferred in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Hamada device to disable the second read in order to continue with the focus detection process until the image focus is possible, so the image can be captured clearly.

In the Hamada reference there is a sensor block 17 that has a plurality of detection areas 16. The sensor outputs a characteristic signal (the contrast in figure 51, step 3015) to determine if the image signal is read out of the sensor (figure 51: steps 3045-3055).

17. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US Patent # 5,758,210) as applied to claim 7 above, and in view of Toshinobu et al. (US Patent # 5,361,095).

18. In regard to claim 8, note Hamada discloses a focusing-information detecting apparatus executing a focusing calculation according to an image signal sent from a sensor block, a first output circuit for outputting the characteristic signal, a second output circuit for outputting the image signal, a first and second signal reading circuit for reading the output circuits, a reading control circuit for comparing the level of the characteristic signal with a determination level, reading the image signal if the comparison results in one relationship, disabling the read if the comparison results in a second relationship, a circuit for detecting focus or distance information, and the

detection of weather focusing has succeeded (figure 51: #3075 and #3035). Therefore, it can be seen that the Hamada device lacks a determination level changing circuit for determining weather focus or distance detection has succeeded, and if so, changing the determination level according to the level of a characteristic signal. Toshinobu discloses the use of a level changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to keep the most recent maximum value as the determination level and to adjust the device for changes in the objects. Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a level changing circuit in order to increase the ability to focus even with the change of an object.

19. In regard to claim 18, note Hamada discloses a focusing-information detecting apparatus executing the accumulation of an image signal, after accumulation a focusing calculation according to the image signal sent from a sensor block, a characteristic determination circuit that determines the characteristics of the image signal, and depending on the result, a reading processing circuit applies a signal reading process at least to other cells not included in the first set if the characteristic signal is a predetermined result, and disabling the signal reading of the other cell units if the characteristic signal is another predetermined result. Therefore, it can be seen that the Hamada device lacks a changing circuit for determining weather focus or distance detection has succeeded, and if so, changing the determination level according to the

level of a characteristic signal. Toshinobu discloses the use of a changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to keep the most recent maximum value as the determination level and to adjust the device for changes in the objects. Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a changing circuit in order to increase the ability to focus even with the change of an object.

20. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US Patent # 5,758,210) in view of Ide (US Patent # 5,905,919) as applied to claim 12 above, and in further view of Toshinobu et al. (US Patent # 5,361,095).

21. In regard to claim 13, note the primary reference of Hamada in view of Ide discloses a focus or distance detection apparatus with a plurality of detection areas, a focus detecting sensor, a difference output section for outputting the difference between the maximum and minimum of the image signal, an image signal output section in each detection area, a signal reading section that reads the difference output, a reading control circuit, a calculation circuit for calculating focus or distance detection information, enabling the read if the difference is greater than a predetermined level and to disabling the read if the difference is smaller than a predetermined level, and the detection of weather focusing has succeeded (figure 51: #3075 and #3035). Therefore, it can be seen that the Hamada device lacks a changing circuit for determining weather

focus or distance detection has succeeded, and if so, changing the determination level according to the level of a characteristic signal. Toshinobu discloses the use of a changing circuit that stores one value in memory and compares the input with the stored value, and depending on the comparison, adjust the stored value according to the input value (column 3, lines 17-30; and column 12, lines 36-43). Toshinobu teaches that the level changing is preferred in order to keep the most recent maximum value as the determination level and to adjust the device for changes in the objects. Therefore, it would have obvious to one of ordinary skill in the art to modify the Hamada device to include a changing circuit in order to increase the ability to focus even with the change of an object.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Claims 9 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As for claims 9, the prior art does not teach or fairly suggest a camera with focus or distance detection, and once the focus or distance detection has succeeded, the determination-level changing circuit changes the determination level to a level between a case in which focus has and has not succeeded.

As for claim 14, the prior art does not teach or fairly suggest a camera with focus or distance detection, and once the focus or distance detection has succeeded, the

determination-level changing circuit changes the determination level to a level between a case in which focus has and has not succeeded.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US005369436A: note the use of an auto-focusing camera.

US005486860A: note the use of an auto-focusing camera.

US006229568B1: note the use of an auto-focusing camera with level comparisons.

US006172375B1: note the use of a distance-measuring camera.

4782396: note the use of an auto-focusing camera using the luminance values to calculate focus.

5822627: note the use of an auto-focusing camera with a plurality of detection areas.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (703) 305-0344. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-HELP.

CSY
January 26, 2004

NGOC-YEN VU
PRIMARY EXAMINER